2/17/2020

Main Ideas

- Finish Section 4.3
- Continuation of Notes from 2/14/2020

2/17/2020

Outlier:

To find your outlier bounds in Excel you use.

Lower Bound: = Select Q_1 − (1.5 * Select IQR)

Upper Bound: = Select Q_3 + (1.5 * Select IQR)

Select Q_1 - select the cell containg Q_1

Select IQR - Select the cell containing IQR

Also in Excel negative numbers do not get negative signs they get parentheses. So in Excel (10) = −10, (99.7) = −99.7, etc.

2/17/2020

Z-score Example:

Who performed best on the aptitude test?

Brittany scored 79.8; $\mu = 61.8$ $\sigma = 9.9$

Tera scored 272.8; $\mu = 264$ $\sigma = 22$

Justin scored 8.34; $\mu = 6.9$ $\sigma = 0.6$

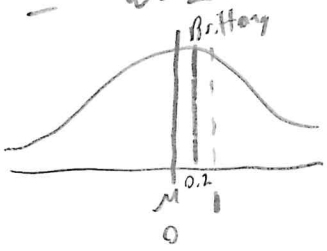
So let's calculate the z-score of each persons score so we can compare them. Round to one decimal place

Brittany

$$z = \frac{x - \mu}{\sigma}$$

$$= \frac{79.8 - 61.8}{9.9}$$

$$= 0.2$$

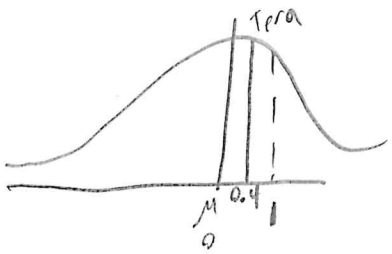


Tera

$$z = \frac{x - \mu}{\sigma}$$

$$= \frac{272.8 - 264}{22}$$

$$= 0.4$$

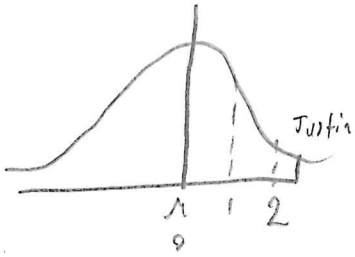


Justin

$$z = \frac{x - \mu}{\sigma}$$

$$= \frac{8.34 - 6.9}{0.6}$$

$$= 2.4$$



So Justin performed the best because his z-score was the highest. This means he scored the highest above average.